



STATE OF MICHIGAN
DEPARTMENT OF MILITARY & VETERANS AFFAIRS
LANSING

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**Construction and Facilities Management
5-Year Capital Outlay Budget Plan**

Fiscal Years 2019-2023

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I. Mission Statement

The Department of Military and Veterans Affairs (DMVA) operates and maintains thirty-six active and four closed state-owned readiness centers, three federally-owned readiness centers, a federally-owned army airfield and state-owned training center at Camp Grayling, and a federally-owned training center at Fort Custer. (A separate plan for Veterans Homes is included at the end of this document.) These facilities must support the mission of tenant organizations for the Army. Facilities are critical to readiness and support unit administration, maintenance, training, and storage. They serve as command centers during domestic emergencies and as platforms for mobilization during times of war. Poor facility conditions negatively affect unit readiness and morale.

- a. Current status of facilities: DMVA's readiness centers range in age from 68 years to less than 10 years and are located on parcels of land that range in size from 2 acres to more than 58 acres. Although millions of dollars are expended yearly to maintain and upgrade these facilities, several have exceeded their functional life span and would require more than can be reasonably justified to be brought up to current accessibility and utilization standards. Of the 39 active readiness centers, 22 do not meet the federal National Guard Bureau's (NGB) mission-support functionality requirements. The mission support functional capability rating is an indicator of the presence or absence of something that would impair unit's capability to support their missions. This includes any deficiency, configuration, or quality of life issue affecting the ability to support the mission.
- b. Recommendations: The DMVA's 5-Year Capital Outlay Budget Plan details the requirement to replace those aging facilities which are cost-prohibitive to continue to maintain and/or bring up to current accessibility and utilization standards. These readiness centers would be replaced with state-of-the-art, energy-efficient facilities, which will be functional throughout the 21st Century. Those readiness centers that have yet to exceed their functional life span would be targeted for upgrade to current accessibility and utilization standards.

II. Programming Changes

Because of anticipated competition for federal and state funds, DMVA has been proactive in contracting master plans for its two training sites, readiness centers, and facility maintenance shops. With these initiatives, DMVA is developing short, mid, and long-term goals that are aligned with its master plan. This will include upgrading and right-sizing readiness centers and facility maintenance shops statewide, and where practical, purchasing buildings that meet DMVA requirements and location needs. At Camp Grayling, DMVA will focus on expanding its

capabilities and collective level missions. This will enable it to provide training for regional states' National Guard units, United States Army Reserve units, and the Active Component. As this occurs, DMVA will focus on developing Fort Custer's capacity for increased numbers of squad level missions and overflow from Camp Grayling. DMVA has set a goal to have Camp Grayling's costs "net-zero," as well as decrease energy use and grid dependency statewide. Over the past four years, DMVA has acquired federal funding to: install a micro grid and expand the solar array project at Fort Custer; replace a generator at headquarters; and design and construct a virtual pipeline, upgrade digital controls, lighting, and boilers, and install a Supervisory Control and Data Acquisition (SCADA) system and one electrical turbine at Camp Grayling.

III. Facility Assessment

- a. Overview: DMVA operates and maintains 36 active state-owned and three federally owned readiness centers, a federally owned army airfield, a state-owned training area at Camp Grayling, and a federally-owned training area at Fort Custer.
- b. Facility age: DMVA facilities range in age from 68 years to less than 10 years old. The functional life span of a readiness center is 50 years. The chart below provides a breakdown on the ages of active readiness centers.

Facility Age	# of Centers
Over 60 years old	4
40-59 years old	17
25-39 years old	9
10-24 years old	8
0-9 years old	1

- c. Property size: DMVA readiness centers are situated on parcels that range in size from two acres to more than 58 acres. The NGB standard for acreage for readiness centers is no less than 15 acres, with 20 acres being desirable. The chart below provides a breakdown on the acreage of active state-owned readiness centers.

Acreage	# of Centers
2-14 acres	27
15-20 acres	3
More than 20 acres	9

- d. Utilization rates: NGB Pamphlet 415-12, Army National Guard Facilities Allowances, prescribes size and utilization of space in readiness centers. In all but the most recently constructed readiness centers, the number and size of classrooms, offices, locker rooms, food preparation, and storage areas are significantly below the standard, resulting in grossly inadequate facilities.
- e. Functionality: Due to changing political climate and war on terror, the military unit force structure has increased. Since many of the DMVA's readiness centers have reached their life span, they need to be extensively upgraded to meet current codes, technological infrastructure, accessibility standards, and logistical mission requirements to match the increases in operations tempo. Most of the readiness centers are not large enough to provide the classroom, storage, locker room, office, administrative space, and fire protection required to meet these standards. Changes in training technologies have placed additional emphasis on simulators and other computer-aided training, which

requires an increased electrical and data infrastructure. The building shell at these readiness centers continues to be of serious concern. The roofs, boiler systems, windows, doors, and other internal infrastructure continue to age and degrade, requiring more and more repairs to keep them in service. Additionally, over 56% of the readiness centers were built prior to 1972; the first year women were permitted to enlist into the Army National Guard, and were not designed to accommodate both genders. Although great strides have been made to address this issue, there are still six readiness centers that do not have adequate locker, restroom, or shower facilities for women.

- f. **Replacement value:** The current adjusted cost for existing facilities, including ancillary buildings at readiness center locations, is \$397,580,564. This consists of historical costs, plus major improvements. However, the replacement value of the existing infrastructure must take into consideration the changes in military force structure and unit composition mentioned in Para III.e above. Therefore, replacement readiness centers will need to be larger and have additional required features and capabilities. The estimated replacement cost of all active state and federally-owned readiness centers is provided in the following chart; the chart does not include the Joint Forces Readiness Center (JFRC).

Type of Readiness Center	Number	Cost per Center	Total Cost
Single-Unit Readiness Centers	24	\$10 million	\$240 million
Multiple-Unit Readiness Centers	15	\$18 million	\$270 million
Total	39		\$510 million

- g. **Facilities utilities systems:** In most instances, utilities (electric, gas, water/sewer, and telephone) for each complex are provided by private or public utility companies. These companies are responsible for upgrade and maintenance of systems to the point of delivery. Upgrade and maintenance of the internal utility infrastructure (heating, ventilating, and air conditioning systems, water pipes, electrical lines, etc.) are the responsibility of the DMVA. Because of the age of many of the readiness centers, there are continuous repair and maintenance requirements for internal utility systems that include work to meet code requirements. Unless the older readiness centers are replaced, extensive repairs are anticipated to electrical, heating, and plumbing systems. Repair and maintenance cost estimates for the next five years can be found in Para IV.b.

In a continued effort to effect energy efficiency, resilience, and independence, numerous energy reduction measures have been utilized when designing new or remodeled facilities. These measures also help in meeting the energy reduction goals that are set forth by federal government requirements. They include such actions as installing lighting fixtures with occupancy sensors, LED lights in facilities, motion sensors in parking lots, double pane windows, high efficiency boilers, increasing the roof and wall insulation R factors, installing demand control ventilation systems, micro grid, and low-flow flush valves on bathroom fixtures. Advanced meters are continually being installed in facilities, as federal funding is received, to more accurately measure utility consumption. DMVA has an Energy Analyst under contract and additionally has awarded an energy audit contract to be completed in fiscal year (FY) 2018.

- h. **Condition of facility infrastructure:** The primary supporting infrastructure surrounding each readiness center is parking surfaces. These include paved and unpaved, government-owned vehicle (GOV) and privately-owned vehicle (POV) areas. At 34 of readiness centers, the GOV and POV parking areas do not meet NGB criteria. In

inclement weather, movement of heavy vehicles on these surfaces cause substantial damage and requires subsequent repair of the parking areas as several are in general degradation status and all 34 are rated poorly. As units are modernized and become more mobile, additional parking requirements for organizational equipment is generated. The required fenced, secure parking areas with security lighting are inadequate. At older locations with minimal acreage, there is insufficient space for GOV and POV parking.

- i. Adequacy of utilities and infrastructure: As outlined in Paras IIIe, IIIf, and IIIg above, several readiness centers require repair and preventive maintenance, including replacement of infrastructure (utilities, roofs, boilers, windows, doors, flooring, etc.), in order to prevent failure of the structural component. A contract has been awarded to validate the real property inventory and populate a geographic information system (GIS) database. This is scheduled to be completed in FY2018.
- j. Capacity for future development on existing land: In some instances, adequate acreage exists to replace readiness centers at the same locations. However, for many of the readiness centers exceeding their useful life span, there is no available space for replacement or future development. Most of these readiness centers are in developed areas of communities.

IV. Implementation Plan

The DMVA Implementation Plan consists of two separate, but equally important, components: readiness center replacement and readiness center infrastructure upgrade/repair/maintenance.

- a. Readiness center replacement: As detailed in Para IIIb., the DMVA has four (4) readiness centers that are over 60 years old and seventeen (17) readiness centers that are over 40 years old. Taking into consideration that there are continuous repair costs, inadequate training facilities, lack of adequate GOV and POV parking areas, as well as a functional need for more acreage, these facilities are targets for replacement. In addition, some demographic markets could support existing or proposed force structure where readiness centers do not exist and should be built.
 - 1) There is one approved military construction (MILCON) readiness center project on the Future Years Defense Plan (FYDP). See the table below for the schedule of the design and construction of the Grayling Army Airfield Readiness Center.

GRAYLING ARMY AIRFIELD READINESS CENTER				
Activity	Total Amount	Federal	State	Year of Funding
P&D/SIOH/Contingency	\$ 2,700,000	\$ 2,400,000	\$ 300,000	FY21-FY22
Construction	\$ 18,000,000	\$ 16,000,000	\$ 2,000,000	FY22
Tails	\$ 1,600,000	TBD	TBD	FY23
TOTALS	\$ 22,300,000	\$ 18,400,000	\$ 2,300,000	

- 2) In order to provide sufficient facilities for the state's soldiers, DMVA will continue to use the economical approach of purchasing existing properties and converting them into readiness centers. With the initial investment made by the state, DMVA can request 50% federal match funds to be used to cover the costs of converting the facility into a readiness center. To date, DMVA has purchased two such properties:

Belmont in 2012 and Traverse City in 2014. The Belmont conversion was completed in 2015 and the Traverse City remodel has begun and is slated to be complete in the first quarter of FY2018.

- 3) DMVA continues to explore the markets in the Marquette, Lansing, and Dundee areas for future readiness center sites. DMVA currently has four readiness centers and numerous small parcels of land for sale with a total appraised value of \$1,300,000. With the balance remaining in the Armory Construction Fund, should a property become available before any of the excess property is sold, DMVA will request support from the State General Fund to help with purchase of property.

- b. Readiness center infrastructure upgrade/repair/maintenance: As outlined in Para IIIe, many readiness centers require upgrading to meeting ADA, training, and functionality requirements. Other locations require upgrade of readiness center infrastructure in order to reduce resultant repair/maintenance costs. The federal government provides reimbursement to the state, normally 50% match, for maintenance repairs on state-owned facilities. As existing facilities continue to age and deteriorate, repair and maintenance requirements will increase. The following repair/maintenance-cycle chart provides details for each type of project.

Type of Project	# per Year	Total Cost
Boiler replacement	2	\$ 115,000
Roof replacement	6	\$ 555,000
Door repair/replacement	2	\$ 50,000
Readiness Center Modifications	10	\$ 5,708,000
Ventilation Improvements	1	\$ 80,000
Masonry Repairs	1	\$ 40,000
Parking Lot Improvements	3	\$ 956,000
Replace Fire Alarms	2	\$ 280,000
Lighting Repair/Replacement	2	\$ 100,000
Lead Abatement	4	\$ 500,000
Install Generator	2	\$ 200,000
TOTALS	35	\$ 8,584,000

- c. Impact of addressing infrastructure repairs and upgrades over time: With an adequate long-range Capital Outlay Plan, the DMVA can program the replacement of aging and deteriorating readiness centers, thus deferring or rescheduling infrastructure repair, maintenance, and upgrade projects. However, some of the repairs accomplished each year are of an emergency nature, where deferment would cause further damage or create a safety risk.

- 1) Addressing infrastructure repairs or upgrades includes maintaining and/or improving the facilities, which are utilized not only by National Guard members during training assemblies, but for emergency use for domestic operations. Properly maintained facilities reflect positively on the image of the Michigan National Guard and the Michigan Department of Military and Veterans Affairs. Unsafe environments are reduced, thereby creating a better environment for the state's soldiers, families, and communities. Completing program repairs will positively affect the ability of assigned units to conduct required training and increase their readiness.

- 2) Addressing infrastructure repairs and upgrades over time falls in line with DMVA's personnel model and federal funding amounts, as DMVA does not have the personnel or federal matching resources to address all infrastructure deficiencies immediately. Additionally, if DMVA were to request funding and schedule all repair/upgrade requirements immediately, there would be an adverse effect on the ability of units to conduct training if many readiness center were undergoing extensive repairs/upgrades at the same time.
- d. Rate of return on expenditures: This Capital Outlay Budget Plan will provide the following operational savings.
- 1) Soldier readiness - By completing the program repairs, it positively affects the ability of assigned units to conduct required training and increase their readiness.
 - 2) Utility savings - The DMVA has realized a significant savings in utility costs as a result of its ongoing efforts to replace non-energy efficient roofs, windows, doors, and heating systems. The scheduled replacement of these items in selected readiness centers over the next five years will further enhance the savings. It is estimated that the rate of return due to the upgrade of utility components is 18% per year, thus recovering investment costs in just four years. As energy audits occur, more detailed information will be available.
 - 3) Readiness center replacement - The capital investment of replacing older readiness centers is recouped during the first 20 years of the life of the readiness centers. In many instances, the DMVA has spent many times more than the state's share of the cost of new readiness center construction in repairs/maintenance costs.

**Michigan Veterans Health System
Grand Rapids and D. J. Jacobetti Homes for Veterans
5-Year Capital Outlay Budget Plan
Fiscal Years 2019-2023**

I. Mission Statement

The Michigan Veterans Affairs Agency (MVAA) is the central coordinating agency charged with providing support, care, advocacy, and service to veterans and their families.

The primary mission of the Michigan Veterans Health System (MVHS), which operates Michigan's two state homes for veterans, is to surround members with a home-like environment in which they are nurtured, strengthened, and comforted so that they may enjoy life to the fullest extent possible. The MVHS seeks to provide the highest quality of care to its members and provide an environment that promotes a meaningful quality of life. To attain this goal, the MVHS must continually assess its programs and services to meet the ever-changing needs of veterans.

a. Objectives:

- 1) Maintain compliance with the laws, regulations, requirements, and standards of the State Nursing Home Regulations and the Federal Veterans Administration (VA) Nursing and Domiciliary Standards.
- 2) Provide the best possible medical and nursing care to meet the needs of each veteran as determined through individual assessment, health professional intervention, and care planning.
- 3) Refine and develop programs continually to meet the changing needs of the state's veteran population while maximizing non-general fund revenues and improving the quality of care.
- 4) Develop, expand, and maintain professionally directed, therapeutically beneficial rehabilitation initiatives consistent with veterans' needs and facility resources that will assist each veteran in achieving and retaining their maximum functional level.
- 5) Maintain a clean, safe, attractive environment, including buildings, grounds, equipment, and areas supportive to veterans' care.

b. MVAA values:

Respect – Treat everyone the way you want to be treated.

Integrity – Always do the right thing with honesty and openness.

Service – Exceed expectations with innovative and collaborative solutions.

Excellence – Strive for the highest quality and continuous improvement.

II. **Grand Rapids Home for Veterans (GRHV) – Age, Use, and Physical Condition**

- a. Overview: GRHV has been providing long-term nursing care for eligible veterans and their dependents at its current location since 1886. GRHV currently provides nursing care at various levels in three resident nursing care buildings.

- 1) Mann Building (built in 1988) - 121,383 sq. ft.
- 2) McLeish Building (built in 1975) - 164,972 sq. ft.
- 3) Rankin Building (built in 1946) - 54,200 sq. ft.

These buildings are all block/concrete/steel/column construction with brick exterior and joined end-to-end on the first floor by breezeway. The facility is significantly outdated and out of touch with long-term care industry standards of excellence.

Other buildings and structures on grounds:

- 1) NCO Club/Clothing Room building, built in 1906, is wood frame construction with stucco exterior (4,900 sq. ft.)

- 2) Public toilet building, built in 1978, is block construction with brick exterior (400 sq. ft.)
- 3) Maintenance building, built in 1979, is block construction with brick exterior (10,800 sq. ft.)
- 4) Power Plant, built in 1956, is block construction with brick exterior (13,941 sq. ft.)
- 5) Poppy Room/Storage building built in 1975 is metal frame building with metal sheeting exterior (2,000 sq. ft.)
- 6) Old Ice House building, built in 1885, is poured concrete construction (1,700 sq. ft.)
- 7) Grounds' building, built in 1974, is metal frame with metal sheeting exterior (2,000 sq. ft.)
- 8) Band shell structure, built in 1976, is wood frame construction with asphalt shingle exterior (2,000 sq. ft.)
- 9) Greenhouse, built in 1967, is aluminum frame with glass construction (2,000 sq. ft.)
- 10) Large tractor garage, built in 1950, is cement block construction (1,089 sq. ft.)
- 11) Cemetery storage building, built in 1885, is block construction (110 sq. ft.)
- 12) Cooling tower structure, built in 2015, is steel and aluminum construction (110 sq. ft.)
- 13) Cannon shelter, built in 1982, is wood frame construction (1,000 sq. ft.)
- 14) Picnic shelter, built in 1983, is wood frame construction (430 sq. ft.)
- 15) Storage building, built in 1998, is metal frame construction with metal sheeting (2,400 sq. ft.)
- 16) Nature trail gazebo, built in 2000, is wood frame construction (675 sq. ft.)
- 17) Grotto Park Healing Garden gazebo built in 2008 is wood frame construction (576 sq. ft.)
- 18) Grotto Park Healing Garden pavilion, built in 2008, is wood frame construction (952 sq. ft.)
- 19) Potting Shed, built in 2013, is wood frame construction (432 sq. ft.)

The total gross square footage of all buildings and structures is 388,070 sq. ft. The entire campus occupies a tract of land of approximately 89 acres.

A registered veterans' cemetery occupies approximately 11½ acres on the north end of the grounds. There is approximately seven wooded acres on the south end of the campus, which is the site of a nature trail for member recreation. To the east (rear) of the buildings, parking is provided for 334 employees and members. To the west (front)

of the facility, parking is provided for 111 visitors and volunteers. The grounds are cared for by the Grounds Department and accessible to all members. All buildings and structures on the grounds are currently being used.

- b. Power Plant: The Power Plant provides heat, domestic hot water, air conditioning, and emergency power for all facilities on the grounds, with the following exceptions.
 - 1) No air conditioning is provided to the maintenance building (except the offices, conference room and break area, served by a stand-alone unit).
 - 2) No air conditioning is provided to the greenhouse.
 - 3) No air conditioning is provided to the grounds building.
 - 4) No air conditioning, heat, or water is provided to the storage building.
 - 5) No air conditioning or water is provided to the large tractor garage.
 - 6) No air conditioning is provided to the poppy room/storage building (air conditioning is provided to poppy room with a stand-alone unit).
 - 7) No air conditioning is provided to the public toilet building.
 - 8) No air conditioning is provided to the NCO Club/Clothing Room building (air conditioning provided to NCO Club side by a stand-alone unit).
 - 9) No air conditioning, heat, or hot water is provided to the cemetery storage building.
- c. Building utilization: At the end of September 2016, the nursing occupancy was approximately 53% of authorized capacity, while the domiciliary was occupied at approximately 20% of authorized capacity. The buildings are aging and member rooms, physical therapy areas, member recreational areas, hallways, and shower rooms are in need of remodeling throughout all buildings. The kitchen and dining areas are in need of remodeling. There is a general shortage of space for equipment storage, housekeeping and general storage that are all supportive to nursing care. Nurse stations in the 40-year-old McLeish Building are not constructed to be HIPPA compliant and are in need of remodeling to adjust for more recent regulations affecting health care institutions. Some equipment used for nursing care and food preparation are aged and in need of replacement.
- d. Mandated facility standards for program implementation:
 - 1) U.S. Department of Veterans Affairs under Nursing Home Care Standards for State Veterans Homes for all aspects of clinical care food standards and life/safety standards.
 - 2) Michigan Department of Licensing and Regulation, Bureau of Fire Services for all applicable NFPA standards and OSHA/MIOSHA General Industry Standards.
 - 3) Life Safety Codes are enforced by the State Fire Marshall.

e. Functionality of existing structures and space allocation:

1) Space allocated by program area:

- Skilled nursing care - 164,683 sq. ft.
- Domiciliary care - 27,566 sq. ft.
- Nursing administration & clinics - 2,009 sq. ft.
- Social services - 1,893 sq. ft.
- Activity/Recreational therapy - 9,143 sq. ft.
- Physical therapy - 2,235 sq. ft.
- Occupational therapy - 990 sq. ft.
- Nutritional services - 11,493 sq. ft.
- Pharmacy - 1,241 sq. ft.
- Medical supplies - 1,838 sq. ft.
- Housekeeping/linen services - 6,525 sq. ft.
- Plant operations - 44,625 sq. ft.
- General administrative - 7,268 sq. ft.
- Employee lounge/locker/toilet areas - 4,691 sq. ft.

2) **Rankin Building** – The Rankin Building is the oldest of the structures, it was constructed in 1946. It provides three stories of resident care, the first level being utilized for nursing care and the second and third level utilized for domiciliary care. It contains terrazzo flooring, ceramic tile walls, and centrally located bathing systems. Exterior brick is in need of tuck and pointing and sealing. The overall roof has exhausted its warranty, is 25 years old, and in need of replacement. The HVAC system is over 30 years old and, while operable, is outdated and inefficient, with an estimated cost of \$750,000 to replace. The windows are 25 years old and will be in need of replacement in the next four years. The elevators are in poor condition. The building has had no electrical enhancements in 25 years. Although the electrical meets code, if there was any major renovation work, the electric in the building upgrading would have to be done, including adding additional electrical outlets and additional lighting fixtures. At almost 70 years old, the building is no longer appropriate for nursing home care relative to community standards. The building is naturally dark, the hallways are narrow, the bathrooms and resident rooms are aged.

3) **McLeish Building** – The McLeish Building was constructed in 1975 and some member rooms and hallways have undergone renovation. The building contains three resident floors and a first floor that houses clinical areas, administrative offices and a cafeteria. The current floor lay out includes 42 resident rooms per floor; two associated nurses' stations with medication rooms; two associated centralized bathing areas with all necessary plumbing fixtures and patient bathing equipment; several associated offices and connecting hallways; two central dining rooms with small pantry areas. Old wood and countertops are prevalent in the building, constructed in the early to mid-1970s. Flooring and doors are being replaced to accommodate wheelchairs and engagement with heavier equipment. The exterior brick is in good condition and a tuck and point was completed in 2001. The building contains several roof systems. The resident roof building was replaced in 1991 and is still in good condition, but would need to be replaced within the next five years. The kitchen roof was replaced in 2003 and in good condition. Another part of the roof, which is covering the resident courtyard section and major social gathering areas, was replaced in 2008 and is in good condition. The HVAC is in good

condition; however it is a pneumatic system, which is thirty-year-old technology. Overall temperatures are appropriately monitored, but controlling individual separate member rooms cannot be accomplished with this technology. The windows were replaced in 2014 as part of an overall remodeling of the building. The project replaced 422 windows of varying sizes and configurations; the rooms and dining areas now meet the VA requirement for glazing and light entry. The elevators are original to the structure, and modernization has only been done to the motors and controls. The vendor has strongly recommended needed upgrades totaling \$1.26M. The interior of the elevator cars consists of original equipment. The electrical system meets code, although as resident rooms are being renovated, more outlets are being added. A new emergency generator was installed the summer of 2015 and is able to supply enough backup power to maintain 100% services in the building.

4) Mann Building – The Mann Building was constructed in 1988. It houses residents on three floors, with 36 resident rooms on each floor. The building is in overall good condition with all exterior components including rooms. The roof, windows, and exterior brick are currently in decent shape. The roof was replaced in 2008 and is in good condition. The utility systems are in good condition. The core infrastructure of the HVAC system is good and operates properly. However the direct digital control (DDC) system for individual rooms is in need of replacement as it is first version technology from 1988. Interior rooms are a maintenance issue with the aging of the building and the rooms do not conform to current day communal nursing home living standards. A new emergency generator was installed the summer of 2015 and is able to supply enough backup power to maintain 100% services in the building.

f. Estimated replacement value of existing facilities: \$140,572,243 including property; based on State of Michigan, Office of Financial Management, Property Accounting Ledger Report for fiscal year ending September 30, 2013 (current book value per the report is \$9,002,615).

The costs of construction for a new modern facility on the current site of GRHV, and a new facility in Southeast Michigan, have been allocated funding from the state.

g. Utility system condition:

- 1) A new domestic hot water plate and frame instantaneous hot water system with back up was installed in 2012. This is in new and excellent condition.
- 2) There are two chillers serving the Home's cooling system. One 425-ton chiller was installed in 2014 and is in good condition. This chiller replaced a chiller that became inoperable in August 2013. Prior to this chiller failing, both chillers were running 100% at peak months. The second chiller was installed in the summer of 2015. The old cooling tower was dismantled and two smaller, efficient cooling towers were installed in the spring/summer 2015 to assist with the cooling of the facility.
- 3) There are three boilers that serve the entire facility providing redundancy in service and range in age from 25 years to 8 years. The boilers are high-pressure steam boilers. They are serviced annually to manufacturer and equipment code standards. The condition of the boilers is good.

- 4) Much of the utility infrastructure from the power plant to the resident buildings is housed in an underground tunnel system where it is protected from the elements. Steam piping and hot water piping is all heavily insulated for efficiency. Some of the piping over the years has been repaired due to faulty welds or fittings breaking. Piping is 25 to 40 years old.
- 5) The electrical system has had periodic upgrades, is up to current state and federal codes. Conduits that take the wiring from the power plant to the buildings are all in underground areas. Much of this is 25 to 40 years old. It is buried and its current true condition is unknown. Four generators serve the Home with stand-by emergency power. The original generator was installed in 1973 and is a 12-cylinder Caterpillar diesel 565kw. It currently only supplies code-required emergency power in resident buildings including exit signage, site lighting, emergency lighting, and boiler power. The Home underwent a project that added three generators to the system in 2015. The generators are located adjacent to the structures. Two service the Mann and McLeish buildings. The third powers the power plant cooling system for cooling in all buildings. They are powered by diesel fuel, supplied in self-contained tanks attached to each generator.
- 6) **Rankin Building** – The HVAC is a rectangular duct system, low velocity with fan coil units located in all patient rooms. This is an inefficient system relative to modern standards. The heating system is a radiant two-pipe system. The water system is galvanized mains and risers with copper supply to all fixtures. The sewage system throughout the building is cast iron, is aged and susceptible to cracking, rusting, and breaking. The electrical system is all copper conductors run in conduit throughout the building. In 2001 a project was done to fully sprinkle and provide fire suppression services to the entire building.
- 7) **McLeish Building** – The HVAC is a rectangular duct system, low velocity with original fan coil units located in all patient rooms. This is an inefficient system relative to modern standards. The air-handling units are a duct system and are not designed for today's standards of atmospheric comfort. Most of the heating and cooling controls in the building are pneumatic. Heating is hot water radiant, one pipe mono-flow tee system. The water system is galvanized mains and risers with copper supply to all fixtures. The galvanized nature of the water system creates a maintenance issue because they rust out and pieces are replaced as they fail with modern piping. The sewage system throughout the building is cast iron, is aged and susceptible to cracking, rusting, and breaking. The electrical system is all copper conductors run in conduit throughout the building. The fire alarm system, including the ceiling smoke detectors, pull stations, door closers, and all annunciating equipment is Siemens. Duct detectors are all wired true alarm to the system. In 2009, the building became fully suppressed with a new fire sprinkling system.
- 8) **Mann Building** – The HVAC is divided into two parts. Each side is served by separate supply air, return air, and make-up air fans. The ductwork system is round, high velocity. The heating system in the building is a hot water radiant, two-pipe system. The water system is galvanized mains and risers with copper supply to all fixtures. The sewage system throughout the building is cast iron. The electrical system is all copper conductors run in conduit throughout the building. The entire building is sprinkled with a charged wet type system. The fire alarm system, including the ceiling smoke detectors, duct smoke detectors, pull stations, door

closers, and all annunciating equipment is Siemens. It is tied to a central alarm system in the McLeish Building.

h. Facility infrastructure condition:

- 1) Roads and parking lots are all asphalt and in good condition. A project to complete restoration and improvement of the onsite parking lots and roads around the facility was completed in early fall 2017.
- 2) Approximately 14,000 sq. ft. of concrete sidewalk is 20+ years old and is in need of replacing. Only spot repairs have been made to take care of sagging and frost heaving sections during this time.
- 3) GRHV has two bridges on its property. One connects the cemetery on the north end of the grounds to the rest of the agency grounds. In July 2012 a bridge inspection by Michigan Department of Transportation Bridge Inspection team was conducted. Based on their report, the bridge was in immediate need of replacement. Vehicular traffic was immediately restricted on this bridge, and a new bridge was installed in summer/fall of 2016. The second bridge is constructed of wood and concrete, and is covered with sod. It is located over Lamberton Creek at the lower pond floor gate. The most recent inspection of this structure occurred in July 2000 and revealed what appears to be some deterioration of the wood structure underneath. Traffic has since been restricted over this bridge to exclude motor vehicles except grounds care equipment.
- 4) The Home has a pond on its grounds fed by Lamberton Creek. The Home is in the study phase of a project to examine the benefits and feasibility of dredging and removing contaminated soil from the pond and its remediation. Dredging can have an impact on the dams and bridges and this is being investigated in conjunction with DVMA Office of Construction and Facilities Management and the state contractor.
- 5) A new front entrance and canopy was completed in fall 2013. The canopy is a steel and tensile structure and is 5,700 square feet in size. There is 3,500 square feet of heated sidewalk underneath the structure. It is in excellent condition.

i. Adequacy of existing utilities and infrastructure system:

- 1) The direct digital control (DDC) system that controls the heating and cooling in the Mann Building is original to the 1988 structure. Due to its age, 80% of the valves have to be manually adjusted to achieve the desired temperatures. Desired temperatures are reached, but to attain this is manual and time consuming. This is a software-based system that contains parts that are no longer available on the market. The pneumatic control heating and cooling system in the McLeish Building is workable, but of old-fashioned design and is very manual. The McLeish Building is a one-pipe mono-flow tee system as opposed to a two-pipe system, which would have been more efficient in heating the space. The McLeish building was constructed in 1973-1975 during the energy crisis when there was a perceived benefit to saving money by putting in a one-pipe system.
- 2) The Home is serviced by substations of the local utility company. If the Home loses its primary electrical source from the utility, within five seconds the utility transfers the

Home to the secondary source and the Home is under full power. The overall condition of the underground electric, given its age, is unknown. The boiler system in is good working order. The generator system was increased during FY2015, as noted in Para II.g.5. The original diesel generator meets the current codes for backup emergency power but is not capable of supplying any extra emergency power in the member care buildings.

- j. Energy audit: A general basic energy assessment was most recently completed in March 2012.
- k. Assessment of existing land: The current site is approximately 89 acres and appears adequate to support the additional construction of a new facility, while potentially tying in with the current supporting road structures if required, to allow access to existing maintenance buildings, etc. The State Veterans Cemetery occupies 11½ acres of this site and contains 5,300+ graves. The current projection is that it has approximately six to eight years of space left for burials. It is probable that a columbarium structure will have to be erected in the near future for remains to extend the active use of the cemetery. The roads in the cemetery are in need of replacement and are in fair to poor condition. The landscaping in the cemetery is old and needs constant maintenance attention and possibly irrigation.

The federally operated VA Clinic building that is to the rear of the Home's property is vacant, as The VA moved their clinic operation to a new and modern location with better highway access. The property is owned by a private entity and is currently listed for sale.

III. GRHV – Implementation Plan

- a. Itemized list of major projects/estimated cost: In December 2016, the Legislature approved a capital outlay bill that authorized and provided state match funding for the construction of a new facility in Grand Rapids and a new facility in Southeast Michigan. Assuming plans for new construction move forward, there are a number of capital investments for items that require lifecycle replacement (specifically infrastructure investments), which would not make sense to pursue proactively. For that reason, GRHV management is currently limiting capital outlay requests to:
 - investments that are critical to ensure the continued provision of safe and quality care to residents until the new facility is open (Category 1)
 - investments that are necessary and for which the need for investment is not eliminated by the planned new construction (Category 2)

It is critical to note that, if the state does not move forward with the construction of a replacement facility in Grand Rapids, there are a number of capital investments that will be necessary for continued operations of the existing facilities. These includes a large number of items that have reached or will reach the end of their remaining lifecycle soon and will need immediate replacement to avoid an emergency replacement project. It also includes projects that would be necessary to get the existing facilities in line with current industry practices and standards.

1) Scenario 1: Capital Outlay Investments if New Construction Plan Moves Forward

FY2018 Supplemental \$315,000:

Item	Description	Cost
Rankin Building Demolition Assessment (Category 2)	<p>Given the large number of infrastructure investments needed and the associated cost, GRHV is in the process of phasing out the use of the Rankin Building to provide resident living space. Once the building is no longer occupied, it is recommended that the Rankin Building be demolished. The FY2018 supplemental request would provide the funding to hire a professional firm to assess actions needed to pursue demolition and provide accurate costs associated with demolition.</p> <p>The roof, HVAC, and hydro elevator in Rankin are all in need of immediate replacement due to current condition. Quickly moving forward with demolition plans for this building will help eliminate the chance that emergency investments will be needed to address critical infrastructure failures, at an estimated cost between \$1.3 and \$1.4 million.</p>	\$80,000
Large Kitchen Appliance Replacement (Category 1)	<p>A number of the large kitchen appliances at GRHV are currently operating well outside expected lifecycles with multiple efforts undertaken to extend lifecycles to this extent possible. It is extremely likely that these appliances will fail within the next 12 – 18 months, requiring an emergency replacement request. Given the high likelihood that replacement of these items will be necessary prior to the opening of a new facility, it is strongly recommended that these items be replaced proactively, rather than waiting until an emergency request is necessary.</p> <ul style="list-style-type: none"> - Hobart Dish Machine (\$75 - \$100k) - Combi Oven x 2 (\$21 - \$31k each) - Hobart 6-Door Walk Through Refrigerator (\$5.5 - \$8.5k) - Tilt Griddle (\$2.5 - \$3k) - Lowerator Tray Dispenser (\$2 - \$2.2k) - Blodgett Convection Ovens x 2 (\$24 - \$30k each) 	\$235,000

FY2019 \$1,319,500:

Item	Description	Cost
Rankin Building Demolition (Category 2)	<p>A demolition assessment of the Rankin Building (54,200 sq. ft.) has not yet been performed. However, initial estimates indicate that the cost of demolition will range from \$3.50/sq. ft. (little remediation associated with demolition) to \$10/sq. ft. (significant remediation associated with demolition). A demolition assessment is necessary to provide a more accurate estimate for demolition.</p> <p>\$189,700 (low) - \$542,000 (high)</p>	\$200,000 - \$550,000

Possible Capital Outlay Emergency Investment Requests \$769,500 (Included above):

Item	Description	Cost
Mann Freight Elevator	Poor condition; 0 years remaining in lifecycle	\$203,000
McLeish Traction Elevators	Poor condition; 0 years remaining in lifecycle	\$495,000
McLeish Kitchen Hydro Elevators	Poor condition; 0 years remaining in lifecycle	\$71,500

2) Scenario 2: Capital Outlay Investments if New Construction Plan Does Not Move Forward

5-Year Investment Needs \$36,335,200:

Item	Description	Cost
Mann Freight Elevator	Poor condition; 0 years remaining in lifecycle	\$203,000
McLeish Traction Elevators	Poor condition; 0 years remaining in lifecycle	\$495,000
McLeish Kitchen Hydro Elevators	Poor condition; 0 years remaining in lifecycle	\$71,500
Mann Traction Elevators	Fair condition; 0-5 years remaining in lifecycle	\$130,000
Mann Brick Exterior Tuck-Point Repair	Fair condition; 0-5 years remaining in lifecycle	\$11,000
CMS Renovations	Needed to obtain CMS certification; code compliance	\$7,200,000
Floor-By-Floor Remodel (McLeish/Mann)	Likely needed to obtain CMS certification; alignment with industry standards	\$16,000,000
Co-Generation and Thermal Storage for Complex	Life safety project	\$8,800,000
Digital Temperature Control System	Life safety project	\$2,200,000
Water Backflow Project	Life safety project	\$165,000
Snoezelen Room/Sensory Rooms on units	Alignment with industry standards, improved quality of care & services	\$18,700
Vinyl Rail Protections	Life safety project	\$176,000
WiFi Routers & Repeaters (Administrative & Business Services)	Improved business processes, efficiencies	\$40,000
WiFi Routers & Repeaters (Resident WiFi Service)	Alignment with industry standards, improved quality of care & services	\$100,000
Fiber Optic Cable/Cat6A (IT upgrades)	Improved business processes, efficiencies; alignment with industry standards, improved quality of care & services	\$100,000
Main Dining Remodel	Alignment with industry standards, improved quality of care & services	\$220,000
Kitchen Operation – Large Appliances	Poor to fair condition; 0 – 5 years remaining lifecycle	\$405,000

- b. **Impact:** The movement forward with constructing new facilities and moving to an authority model of governance affords many advantages, as discussed in detail in the Veterans Long-Term Care Workgroup’s recommendations. This includes modernizing and improving the care provided to the state’s veterans, the eventual elimination of a structural deficit, creating a model of financial sustainability, and reducing the assessed need to spend over \$36M in capital needs for required facility renovations if the new homes are not constructed.

New facilities would provide home-like rooms affording more dignity and quality of life to the Michigan veterans who live here and rely on the State of Michigan for their medical care and quality of life. The federal Omnibus Budget Reconciliation Act (OBRA) of 1987 amended the Medicaid program requirements for nursing homes, and OBRA

(425CFR483.70[d]) specifies that member rooms must be designed and equipped for adequate care, comfort, and privacy of the resident. The current program structure does not allow for adequate privacy for veterans and their families and it does not provide a home-like environment.

Lastly, the investment(s) in new facilities and a new form of governance proposes an opportunity to the Legislature, Executive Office, and citizens of the State of Michigan to make a positive impact on the future of how the state cares for the men and women who have worn our nation's cloth. It is time the State of Michigan "does this right."

The prioritization of needs for GRHV capital needs, assuming the ongoing construction of (2) new homes, will be driven by individual project and its immediate need for health & welfare, and operations & cost, versus the ability to create intermittent solutions that prevent significant investments. In summary, the requested stabilization costs for capital outlay for GRHV will be utilized to maintain operations and remain within compliance, limiting investment to absolute need, while additional facilities are being constructed.

- c. Operational savings: The proposed plan requires significant "up-front" investments with savings to be realized over time. It is estimated if a new facility is not constructed, the Home could require more than \$36M in renovations, equipment replacements and repairs, and other capital-type costs due to the poor condition of the facility and the need to maintain and/or return to compliance with appropriate regulations and standards. Similarly, the construction and change of governance affords the opportunity to create a system of homes, in regions where they are needed, in line with the common standards of long-term care, while creating the ability and flexibility to develop and establish a model of financial sustainability and growth.

IV. D. J. Jacobetti Home for Veterans (DJJHV) – Age, Usage, and Physical Condition

- a. Overview: DJJHV is operated as a long-term care facility and the buildings along with the parking lots encompass 90% of the available land. The original building was constructed in 1954 and has undergone additions in 1965, 1967, and 1988. The latest construction in 1988 was a 50-bed addition and this wing has an independent heating system and a shared chilled water cooling system (updated 2012). The Home is constructed of masonry and brick veneer walls with interior plaster finishes. With the exception of the 1988 50-bed addition, ceramic tiles are installed up to 48 inches above finished floors in public areas. The roof has an average of 6 inches of insulation except over the Chapel.
- b. Building utilization: The Home typically maintains a skilled nursing occupancy rate of approximately 95%.
- c. Mandated facility standards:
 - 1) U.S. Department of Veterans Affairs under Nursing Home Care Standards for State Veterans Homes for all aspects of clinical care food standards and life/safety standards.
 - 2) Michigan Department of Licensing and Regulation, Bureau of Fire Services for all applicable NFPA standards, Life Safety Code, and OSHA/MIOSHA General Industry Standards.

- 3) Life Safety Codes are enforced by the State Fire Marshall.
 - 4) Additionally, the Home is pursuing Centers for Medicare & Medicaid Services (CMS) certification, and is thus making changes to be in compliance with the requirements of CMS and the conditions of participation.
- d. Functionality of existing structures/space allocation to program areas served:
Approximately 560 sq. ft. per member.
 - e. Estimated replacement value: \$58,678,000; based on grant requests from the VA State Home Construction Grant Program.
 - f. Assessment of utilities system: All resident areas of the Home are air-conditioned. Some staff and utility areas are not air-conditioned. The electrical system was updated in 2006 with the installation of a new emergency generator, transfer switch, and replacement of many power panels and feeders. In addition, corridor lighting was upgraded to meet NFPA Life Safety Code. An automated fire suppression sprinkler system was installed in 2006, providing coverage to the entire building. Previously, only hazardous areas and a portion of the nursing units were sprinkled. A large portion of the plumbing system in the oldest part of the building has been replaced; however, additional upgrades will be required. Due to deterioration of the system, some repairs are needed on an on-going basis as the waste and vent piping disintegrates. The heating system was upgraded in 1998 and is in fair condition. Some emergency re-tubing was completed in 2007.
 - g. Assessment of infrastructure: Much of the roofing has been updated and is in good condition, with the most recent upgrade occurring in 2015 on Part F wing. The amount of parking available is barely adequate at this time due to an increasing number of volunteers, visitors, and families at the Home each day. The Home is no longer able to utilize parking in an adjacent abandoned parking lot (non-state owned), as that building is being renovated for low-cost housing.
 - h. Adequacy of utilities and infrastructure systems to current and 5-year needs: The plumbing system is adequate but requires ongoing repairs. The roofs are currently adequate. The parking is in good condition, although expansion is needed.
 - i. Assessment of existing land; capacity for future development; acquisition needs:
Existing land is adequate for current operations, but additional structure, land, or solutions will need to be developed to ensure sufficient parking is available for members, employees, and visitors.

V. DJJHV – Implementation Plan

- a. Major projects in priority order with estimated costs:

FY2018 Supplemental \$650,000:

Item	Description	Cost
Resident Room Doorway Replacement	Necessary for CMS Certification; Code Compliance	\$120,000
HILTI Fire Safety Upgrades	Necessary for CMS Certification; Code Compliance	\$20,000
Nurse Call System Upgrades	The current nurse call system in use by the Home was installed in 1982, and has become obsolete. Necessary to ensure compliance with CMS requirements; ensure quality care for residents.	\$195,000
Security System Upgrades	Physical security improvements (cameras and key card accessibility) to ensure safety and control. Necessary to ensure compliance with CMS requirements; ensure quality care for residents.	\$200,000
Physical Therapy Equipment	Necessary for CMS Certification	\$75,000
Scheduling & Payroll Based Journaling Software	Necessary for CMS Certification	\$40,000

FY2019 \$1,325,000:

Item	Description	Cost
1 South Dining	CMS requires person-centered care, and the creation of a home-like environment to the extent possible. The Home is modifying its food service structure to bring on-unit dining to members of the Home. The next stage of this process (following 2 North's on-unit dining project) is the creation of on-unit dining on the 1 South unit. Necessary to ensure compliance with CMS requirements (person-centered care); ensure quality care for residents consistent with LTC industry standards.	\$300,000
Renovation of Physical Therapy Area	As the Home pursues and achieves CMS certification, the rehabilitation operations and structure will change drastically from current operations. Additionally, the current space is outdated and requires upgrade. Necessary to ensure compliance with CMS requirements (person-centered care); ensure quality care for residents consistent with LTC industry standards.	\$225,000
Parking Lot Renovations/Expansion	Parking is limited at the Home, and requires expansion. Necessary because the Home does not currently have adequate parking available for staff and visitors.	\$800,000

FY2020 \$570,000:

Item/Description	Cost
Replace Air Handling Units	\$300,000
Humidifier Replacement	\$120,000
Water Heater Replacement Main Boiler Room	\$25,000
Replace How Water Circulation Lines	\$40,000
Replace Rooftop fans (x30)	\$70,000
Heat in elevator shaft #5	\$15,000

FY2021 \$2,487,000:

Item/Description	Cost
Renovation of Nursing Units: In the transition to making the Home as home-like as possible, significant changes are required over time to improve the atmosphere and ambiance of the facility	\$400,000/unit; \$2,400,000
Member Closet Upgrade	\$50,000
West Patio Construction	\$25,000
East Patio Enlargement	\$12,000

FY2022 \$1,700,000:

Item/Description	Cost
Installation of Emergency Generator & Backups	\$1,700,000

FY2023 \$500,000:

Item/Description	Cost
Repair Hail Damage on 15-year old Chiller	\$500,000

- b. Impact of addressing structural repairs immediately vs. over the next five years:** Based on the Home's needs and priorities, the requests are scheduled in order of priority. The impacts of not addressing the issues are significant, resulting in emergency repair efforts being required, the failure of the Home to meet Life Safety Code standards, or the failure to meet CMS requirements.

Renovations and upgrades are as important for current veterans (24% are WWII era), as they will be for future veterans, and completing the renovations as soon as feasible is the prudent action in the state's efforts to provide long-term care for our nation's heroes.

- c. Rate of return/savings generated by capital outlay:** Maintaining modern and up-to-date physical plant and living environment allows the Home to maximize its nursing census, which in turn, maximizes federal and restricted revenues, reducing the state portion of the cost of operating the home. Additionally, the achievement of CMS certification will place the Home under a financial model (from the potential applicant or resident's perspective) more closely aligned with every other private and not-for-profit nursing home in existence in the region (Medicare funding, Medicaid funding, etc.). As such, the Home needs to create an inviting and home-like atmosphere, which includes a high-quality physical environment, to attract and retain potential qualified applicants to ensure the continuity of revenue for sustained operations.

For long-term planning for capital outlay, the state would be better served by investing in a new building that provides for more cost effective operations and meets current standards of care vs. continuing to invest heavily in the current building.